System Description for 6 DOF Robotic Arm

The goal of this project is to implement 6 degrees of freedom(DOF- roll, yaw, pitch, x, y, z direction) motion on a 6 axis robotic arm by employing inverse kinematic method on MATLAB and embedded programming in C language.

In order to simulate the robotic arm and implementing inverse kinematic algorithms on MATLAB, Robotics Toolbox and Book ‘*Robotics, Vision and Control’* from Dr Peter Corke is used. A brief virtual model simulating 6 axis robotic is built based on the Robotics Toolbox with inverse kinematic function, which allows visualization of positioning of the robotic arm while different coordinate instruction is given to the robotic arm.

Robotics Toolbox available from <http://petercorke.com/wordpress/toolboxes>